[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 14826 3/14/2001]

[Docket No. 2000-NE-48-AD; Amendment 39-12142; AD 2001-05-06]

RIN 2120-AA64

Airworthiness Directives; BMW Rolls-Royce GmbH Models BR700-710A1-10 and BR700-710A2-20 Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to BMW Rolls-Royce (RR) GmbH models BR700-710A1-10 turbofan engines with fan disk part numbers (P/N's) BRR18803, BRR19248, or BRR20791 installed, and BR700-710A2-20 turbofan engines with fan disks P/N's BRR19248 or BRR20791 installed. This action requires initial and repetitive inspections of these fan disks for cracks, and if necessary replacement with serviceable parts. This amendment is prompted by reports of cracks in several fan disks in the dovetail area. The actions specified in this AD are intended to detect cracks in the fan disk, that could result in an uncontained engine failure and damage to the airplane.
DATES: Effective March 29, 2001. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 29, 2001.

Comments for inclusion in the Rules Docket must be received on or before May 14, 2001.

ADDRESSES: Submit comments to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-48-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Rolls-Royce Deutschland GmbH, Eschenweg 11, D-15827 DAHLEWITZ, Germany, telephone: International Access Code 011, Country Code 49, 33 7086-2935, fax: International Access Code 011, Country Code 49, 33 7086-3276. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781-238-7176, fax: 781-238-7199.

SUPPLEMENTARY INFORMATION: The Luftfahrt-Bundesamt (LBA), which is the airworthiness authority for Germany, recently notified the Federal Aviation Administration (FAA) that an unsafe condition may exist on BMW RR GmbH models BR700-710A1-10 and BR700-710A2-20 turbofan engines with the P/N fan disks listed in this AD. The LBA received several reports of cracks in fan disks, in the dovetail

area. BMW Rolls-Royce has initially determined that these cracks are caused by high-cycle-fatigue, and that time predictions and cycle predictions for

crack initiation cannot be accurately determined. BMW RR is investigating the cause for fan disk cracking, and may introduce a new part number disk as terminating action of the repetitive inspections. This AD may be revised when a terminating action is established.

Manufacturer's Service Information

Rolls-Royce Deutschland (RRD) GmbH has issued Service Bulletin No. SB-BR700-72-900229, Revision 2, dated November 23, 2000 that specifies procedures for initial and repetitive inspections for fan disk cracks. The LBA classified this service bulletin as mandatory and issued airworthiness directive (AD) 2000-348, Revision 2, dated November 23, 2000 in order to ensure the airworthiness of these engines in Germany.

Differences Between Manufacturer's Service Information and this AD

Although the visual inspection requirements of Service Bulletin No. SB-BR700-72-900229, dated November 23, 2000, do not specifically define the pass/fail criteria for fan disks, this AD specifically instructs the rejection of fan disks that have visual cracks. FAA communication with RRD has confirmed that the intent of the service bulletin is to require the owner/operator to default to appropriate maintenance manuals for pass/fail criteria. A subsequent review of the maintenance manuals by the FAA has confirmed that no cracks are allowed in the fan disks.

Bilateral Airworthiness Agreement

This engine model is manufactured in Germany and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the LBA has kept the FAA informed of the situation described above. The FAA has examined the findings of the LBA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Required Actions

Since an unsafe condition has been identified that is likely to exist or develop on other engines of the same type design, this AD requires initial and repetitive inspections of the fan disks listed in this AD for cracks, in accordance with RRD Service Bulletin No. SB-BR700-72-900229, Revision 2, dated November 23, 2000, and, if necessary, replacement with serviceable parts. The inspections must be done in accordance with the Service Bulletin described previously in this AD.

Immediate Adoption

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted to the address specified under the caption "ADDRESSES**".** All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NE-48-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

2001-05-06 BMW Rolls-Royce GmbH: Amendment 39-12142. Docket 2000-NE-48-AD.

Applicability

BMW Rolls-Royce (RR) GmbH models BR700-710A1-10 with fan disks part numbers (P/N's) BRR18803, BRR19248, or BRR20791 installed, and BR700-710A2-20 turbofan engines with fan disks P/N's BRR19248 or BRR20791 installed. These engines are installed on but not limited to Bombardier Inc. BD-700-1A10, and Gulfstream Aerospace Corp.G-V series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Required as indicated, unless accomplished previously.

To detect cracks in the fan disk, that could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Initial Inspection

(a) Within 25 flight cycles after the effective date of this AD, visually or ultrasonically inspect fan disks in accordance with Accomplishment Instructions, Paragraph 3 of Rolls-Royce Deutschland (RRD) Service Bulletin No. SB-BR700-72-900229, Revision 2, dated November 23, 2000. If any cracks are found, remove disk from service and replace with a serviceable disk.

Repetitive Inspections

(b) Thereafter, in accordance with Accomplishment Instructions, Paragraph 3 of Rolls-Royce Deutschland (RRD) Service Bulletin No. SB-BR700-72-900229, Revision 2, dated November 23, 2000, inspect every 25 flight cycles, using either visual or ultrasonic method, except if the initial inspection was a visual inspection, the second inspection must be an ultrasonic inspection. Also, perform an ultrasonic inspection at intervals not exceeding 450 flight hours since the last ultrasonic inspection. If any cracks are found, remove disk from service and replace with a serviceable disk.

(c) For the purposes of this AD, serviceable fan disks are disks that have had an initial inspection, either visual or ultrasonic, in accordance with Accomplishment Instructions, Paragraph 3 of RRD Service Bulletin No. SB-BR700-900229, Revision 2, dated November 23, 2000, and found not cracked.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) The inspections required by this AD must be performed in accordance with RRD Service Bulletin No. SB BR-700-72-900229, Revision 2, dated November 23, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained Rolls-Royce Deutschland GmbH, Eschenweg 11, D-15827 DAHLEWITZ, Germany, telephone: International Access Code 011, Country Code 49, 33 7086-2935, fax: International Access Code 011, Country Code 49, 33 7086-3276. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on March 29, 2001.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781-238-7176, fax: 781-238-7199.

Issued in Burlington, Massachusetts, on March 1, 2001.
David A. Downey, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.